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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,383	07/03/2001	Mika Ryukawa	33452	6841

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EXAMINER	
CONNOLLY, MARK A	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/806,383	RYUKAWA ET AL.	
	Examiner	Art Unit	
	Mark Connolly	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-18 and 24-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *17,18,26 and 28* is/are allowed.

6)☒ Claim(s) *13-15,24,25 and 27* is/are rejected.

7)☒ Claim(s) *16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 13-18 and 24-28 have been presented for examination.

2. The finality of the previous office action mailed 7/22/05 has been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 13, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Holtzhammer[1] and further in view of Lenny US Pat No 6467054.

5. Referring to claim 13, the AAPA teaches the virtual computer system for executing/controlling a plurality of operating systems substantially including:

a. a request receiving means for receiving at least one of a power-supply-ON request and a power-supply OFF request to one or more of the hardware devices from one of the plurality of operating systems [page 4 line 3 – page 6 line 2 and page 6 lines 14-25].

b. a power-supply switching/controlling means for controlling process execution of the at least one request [page 4 line 3 – page 6 line 2 and page 6 lines 14-25].

The AAPA does not explicitly teach not performing the process execution of the at least one request when another operating system is using one or more of the hardware devices. In summary, the AAPA does not teach not performing a power-supply ON or OFF request if the device is in use with another operating system. Holtzhammer explicitly teaches not performing a

power transition in a device while the device is busy [col. 3 line 57 – col. 4 line 3]. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the AAPA to include the teachings of Holtzhammer because Holtzhammer explicitly teaches that if the device is busy, it may not be safe to initiate a power transition in a device. Because the AAPA-Holtzhammer system comprises multiple operating systems controlling a hardware device, it is interpreted that if the hardware device is busy with one operating system another operating system request to change the power state of the device would be ignored in order to prevent an unsafe power transition.

Although the AAPA-Holtzhammer system teaches either performing or not performing the power-supply OFF request based on whether or not at least one device is busy, it is not explicitly taught how the system identifies a busy device. Lenny explicitly teaches setting a busy flag to indicate to the system that a device is busy [col. 1 lines 37-45 and col. 2 lines 60-61]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Lenny into the AAPA-Holtzhammer system because it would provide a means to determine whether or not any of the devices are busy thus indicating that the system should not transition into a different power state.

6. Referring to claims 24 and 27, these are rejected on the same basis as set forth hereinabove.

7. Claims 14, 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA, Holtzhammer and Lenny as applied to claims 13, 24 and 27 above, and further in view of Reuter et al [Reuter] US Pat No 6226717.

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[1] As cited in the previous Office Action

8. Referring to claim 14, this is rejected on the same basis as set forth hereinabove. The busy flags are interpreted as stored power-saving mode information because the flags determine whether or not a transition to a different power mode is allowable as argued above.

Although, the AAPA-Holtzhammer-Lenny system substantially teaches the claimed virtual computer, it is not explicitly taught that the system waits to set a power mode until the computer system is switched to the requesting operating system. Rather, it appears that the AAPA-Holtzhammer-Lenny system immediately executes new requests and does not provide any exclusivity with the interactions between the hardware devices and operating systems. Reuter explicitly teaches providing exclusive access to a shared resource [col. 1 lines 26-39 and col. 2 lines 9-19]. Although, Reuter teaches providing exclusivity between a plurality of processors interacting with a plurality of shared resources, it would have been obvious to one of ordinary skill in the art that the same principles taught in Reuter could be applied to a system comprising a plurality of operating systems interacting with a plurality of shared resources because both systems deal coordinating interactions between the shared resources and a plurality of different sources. Furthermore, it would have been obvious to include the teachings of Reuter into the AAPA-Holtzhammer-Lenny system because it would provide a means to prevent one operating system from interfering with another operating systems interactions with one or more of the shared resources. In addition, because Reuter teaches locking the shared resource, it should be apparent that while a shared resource is locked, no other operating systems would have the ability to interact with that resource until the shared resource is released and the system switches control over to the other operating system. This is interpreted also as preventing another operating system from issuing power control commands to set the shared resource into a

power saving mode while that shared resource is locked and wherein the other operating system must wait until the shared resource is released and the system switched control over to the other operating system before the other operating system is able to issue power control commands to the shared resource.

9. Referring to claim 15, the AAPA teaches the power-saving mode switching/controlling means can set/change the power-saving mode based on the power-saving mode information during the execution of the operating system [page 4 line 3 – page 6 line 2 and page 6 lines 14-25].

10. Referring to claim 25, this is rejected on the same basis as set forth hereinabove.

Allowable Subject Matter

11. Claims 17, 18, 26 and 28 are allowed.

12. Claim16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

13. Applicant's arguments filed 10/19/05 have been fully considered but they are not persuasive.

14. Applicants argue in substance 1) Lenny does not teach storing mode information about a hardware device with respect to each of a plurality of operating systems 2) proper motivation has not been provided for modifying the AAPA according to the cited references because the motivation cannot be found in the application itself.

15. In response to argument 1, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The AAPA-Holtzhammer-Lenny system teaches storing mode information about a hardware device with respect to each of a plurality of operating systems. For further clarification, the busy flags taught in the AAPA-Holtzhammer-Lenny system are interpreted as execution and mode information as they identify the busy states of the devices. In order to set a flag, it is inherent that a storage capability must exist.

16. In response to argument 2, motivation to combine was not found in the application itself. Rather, motivation to combine was found in the Holtzhammer and Lenny references as seen in the previous office action. In particular, Holtzhammer explicitly teaches that it is unsafe to power transition a device while still busy and thus the incorporation of Holtzhammer into the AAPA would eliminate any unsafe power transitions as expressly stated in the previous office action. In addition, Lenny teaches setting a flag to identify whether or not a device is currently busy and the incorporation of Lenny into the AAPA-Holtzhammer system would provide a means to indicate device busy states within the system as also expressly stated in the previous office action.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Connolly
Examiner
Art Unit 2115

November 16, 2005
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